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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,335	03/06/2002	George Robert Hulse	FMO P-3127-2	8988
27305	7590	12/01/2004	EXAMINER	
HOWARD & HOWARD ATTORNEYS, P.C. THE PINEHURST OFFICE CENTER, SUITE #101 39400 WOODWARD AVENUE BLOOMFIELD HILLS, MI 48304-5151			SONG, SARAH U	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,335

Applicant(s)

HULSE ET AL.

Examiner

Sarah Song

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-27 is/are allowed.
- 6) ☒ Claim(s) 28-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's communication filed on September 17, 2004 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims, are persuasive and the rejections based upon prior art made of record in the previous Office Action are withdrawn. Claims 28 and 30 have been amended. Claims 1-31 are pending.

Claim Rejections - 35 USC § 103

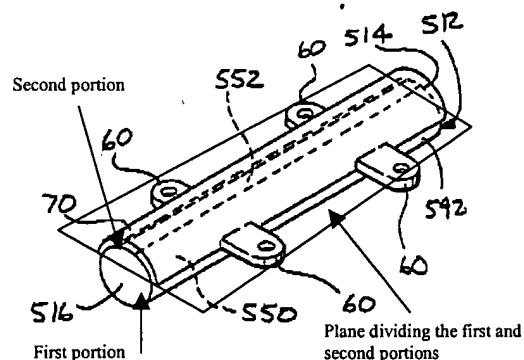
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulse (WO 00/42456 previously relied upon) in view of Sugiyama et al. (U.S. Patent 6,278,827 newly cited).**

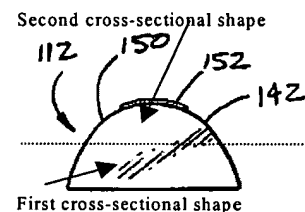
4. Regarding claim 28, Hulse discloses an illuminating waveguide comprising:

- an elongated solid light transmitting body 512 having:
 - o a first portion extending lengthwise along said body and having a light transmissive surface (surface opposite reflective coating 70), and



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- a second portion extending lengthwise along said body;
 - mounting features 60 located proximate the intersection of said first and second portions of said light transmitting body, at least two of said mounting features being spaced from each other (see figure) and extending laterally away from said body; and
 - a reflective coating 70 on said second portion extending circumferentially from one of said mounting features to another of said mounting features;
 - wherein said first portion has a first cross-sectional shape and said second portion has a second cross-sectional shape which directs internally-reflected light towards said first portion for transmission out of said body through said light transmissive surface; and
 - wherein said first and second portions have a consistent cross-sectional shape along substantially the entire elongated length of said body (see page 9, lines 4-16).
5. Hulse does not specifically disclose the second cross-sectional shape of the body 512 to be different in shape than said first cross-sectional shape.
6. Hulse discloses alternative embodiments wherein the elongated solid light transmitting body may have the structures as shown in Figure 3 or 4.
7. Figure 3, for example shows the cross-sectional shape of the elongated solid light transmitting body, comprising different first and second cross-sectional shapes.
8. It would have been obvious to one having ordinary skill in

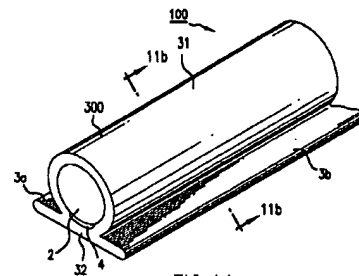


the art at the time the invention was made to provide the body 512 having the alternative shape, shown in Figure 3 of Hulse, comprising the first and second portions having different cross-sectional shapes.

9. The motivation to do so would have been to intensify the light directed out of the light transmitting body in order to provide brighter illumination to the interior of the vehicle body as taught by Hulse (see page 7, lines 16-25).

10. Hulse also does not specifically disclose mounting features having a consistent cross-sectional shape along substantially the entire elongated length of said body.

11. Sugiyama et al. discloses a mounting features 3a and 3b having a consistent cross-sectional shape along substantially the entire elongated length of said body.



12. Hulse and Sugiyama et al. are analogous art as pertaining to laterally-directed illuminating devices.

13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the mounting features of Hulse to comprise the mounting features of Sugiyama et al. having a consistent cross-sectional shape along substantially the entire elongated length of said body.

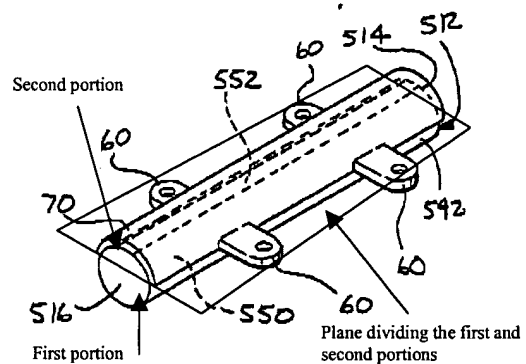
14. One of ordinary skill in the art would have been motivated to provide mounting features having a consistent cross-sectional shape along substantially the entire elongated length of said body in order to facilitate manufacturing (e.g. by extrusion) and subsequent mounting as taught by Sugiyama et al. (see column 28, lines 27-29 and 58-65; column 29, lines 10-24).

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15. Regarding claim 29, the mounting features of Sugiyama et al. are also elongated flanges 3a and 3b that are integrally formed with said body (i.e. extruded, see column 28, lines 11-25), said flanges extending lengthwise along at least a portion of said body (see Figure 11a).

16. Regarding claim 30, Hulse discloses an illuminating waveguide comprising:

- an elongated solid light transmitting body 512 having:
 - o a first portion extending lengthwise along said body and having a light transmissive surface (surface opposite reflective coating 70), and
 - o a second portion extending lengthwise along said body;
- a plurality of mounting features 60 each extending laterally away from said body from a distal end to a free end;
- wherein said free ends of at least two of said mounting features are spaced from each other with said body 512 being located within the space between said free ends (see figure); and
- wherein said first portion has a first cross-sectional shape and said second portion has a second cross-sectional shape which directs internally-reflected light towards said first portion for transmission out of said body through said light transmissive surface; and
- wherein said first and second portions have a consistent cross-sectional shape along substantially the entire elongated length of said body (see page 9, lines 4-16).

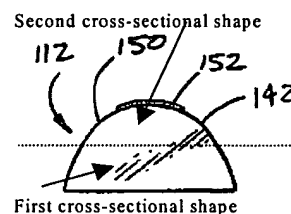


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17. Hulse does not specifically disclose the second cross-sectional shape of the body 512 to be different in shape than said first cross-sectional shape.

18. Hulse discloses alternative embodiments wherein the elongated solid light transmitting body may have the structures as shown in Figure 3 or 4.

19. Figure 3, for example shows the cross-sectional shape of the elongated solid light transmitting body, comprising different first and second cross-sectional shapes.

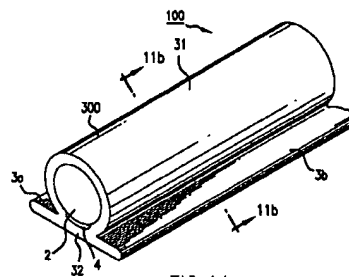


20. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the body 512 having the alternative shape, shown in Figure 3 of Hulse, comprising the first and second portions having different cross-sectional shapes.

21. The motivation to do so would have been to intensify the light directed out of the light transmitting body in order to provide brighter illumination to the interior of the vehicle body as taught by Hulse (see page 7, lines 16-25).

22. Hulse also does not specifically disclose mounting features having a consistent cross-sectional shape along substantially the entire elongated length of said body.

23. Sugiyama et al. discloses a mounting features 3a and 3b having a consistent cross-sectional shape along substantially the entire elongated length of said body.



24. Hulse and Sugiyama et al. are analogous art as pertaining to laterally-directed illuminating devices.

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25. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the mounting features of Hulse to comprise the mounting features of Sugiyama et al. having a consistent cross-sectional shape along substantially the entire elongated length of said body.

26. One of ordinary skill in the art would have been motivated to provide mounting features having a consistent cross-sectional shape along substantially the entire elongated length of said body in order to facilitate manufacturing (e.g. by extrusion) and subsequent mounting as taught by Sugiyama et al. (see column 28, lines 27-29 and 58-65; column 29, lines 10-24).

27. Regarding claim 31, the mounting features of Sugiyama et al. are elongated flanges 3a and 3b, said flanges extending lengthwise along at least a portion of said body (see Figure 11a). Furthermore, since the mounting flanges of Hulse are located proximate the intersection of said first (transmissive) and second (reflective) portions of said body as noted above with respect to claim 28, one of ordinary skill in the art would have found it obvious to position the mounting flanges of Sugiyama et al. in the same relative positions in order to provide the illuminating device of Hulse in the same position on the mounting panel as intended. Therefore, it would have been obvious to locate the mounting flanges 3a and 3b of Sugiyama et al. in substantially the same position relative to the waveguide of Hulse such that the waveguide would be mounted in the same manner relative to the panel 28.

Allowable Subject Matter

28. Claims 1-27 are allowed.

29. The following is a statement of reasons for the indication of allowable subject matter: Hulse discloses the illuminating waveguide to provide an intense, directed beam of light (see

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page 7, line 4 through page 8, line 6. Claims 1 and 15, however recite the limitation for light being diffusely transmitted through the light transmissive first surface. Therefore, Hulse teaches away from an illuminating waveguide wherein light is diffusely transmitted through the first surface. Sugiyama et al. also does not disclose or suggest an illuminating waveguide wherein light is diffusely transmitted through the first surface, but rather discloses an illuminating waveguide with high brightness and directivity. Therefore, claims 1 and 15 are allowable over Hulse and Sugiyama et al. Claims 2-14 and 16-27 are allowable as depending from claim 1 or 15.

Response to Arguments

30. Applicant's arguments with respect to claims 28-31 have been considered but are moot in view of the new ground(s) of rejection. The modification for the mounting features having a consistent cross-sectional shape along substantially the entire elongated length of the illuminating waveguide body is disclosed and reasonably suggested by the prior art as noted in the rejections above.

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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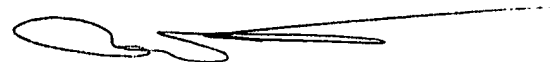
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Song whose telephone number is 571-272-2359. The examiner can normally be reached on M-Th 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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